

# On the Identity of *Murex macropterus* DESHAYES, 1839 (Mollusca : Gastropoda)

BY

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(Plates 19 and 20)

## DISCUSSION

*Murex macropterus* was described by DESHAYES (1839) on the basis of a single specimen from an unknown locality. Despite the fact that DESHAYES (1841) later illustrated the specimen, the identity of this taxon has remained an enigma to the present time. The description and figure indicate a muricid specimen of 43 mm in height, having a blade-like outer lip that is sculptured with numerous crenulate imbrications (see Plate 19, figure 1). The original illustration was later copied by SOWERBY (1880) and TRYON (1880), and a second specimen, also lacking locality data, was referred to this species and figured by REEVE (1845).

Speculation over the identity of *Murex macropterus* resulted in the name being applied to species occurring in several faunal provinces. TRYON (1880) compared it to the west African species, *Murex lingua* DILLWYN, 1817. DALL (1889) and others cited it from the western Atlantic, but CLENCH & FARFANTE (1945) rejected this identification and named the east American species *Murex* (*Pteropurpura*) *bequaerti*. Several students, including SOWERBY (1880), have suggested that the name was applicable to one of the trivariolate species from Japanese waters. EMERSON (1960) proposed that the type specimen most closely resembles some of the forms of the *Murex trialatus* - *rhyssus* complex of ABBOTT (1954) from the eastern Pacific. Obviously, none of these suggestions can be verified without reference to the type specimen, the depository of which was not indicated. Inasmuch as *Murex macropterus* DESHAYES is the type species, by monotypy, of *Pteropurpura* JOUSSEAUME (1880), the identity of this taxon is of taxonomic importance as well as of nomenclatural interest.

I undertook, therefore, to inquire of colleagues in European museums if the type specimen is still extant.

Mr. Peter Dance informed me (*in litteris*) that a specimen labeled *Murex macropterus* DESHAYES, lacking locality data, was present in the Hugh Cuming collection of the British Museum (Natural History). This probably is the specimen mentioned by SOWERBY (1880) as being in the British Museum, but the label accompanying the specimen does not indicate the person responsible for the identification or the name of the collector. An examination of the specimen (see Plate 19, figure 3) shows it to be referable to the eastern Pacific species commonly referred to *Pteronotus carpenteri* DALL (1899). While not the holotype of *M. macropterus* DESHAYES (*cf.* Plate 19, figures 1 and 3), the specimen in the British Museum appears to be referable to Deshayes' taxon.

My search eventually proved to be fruitful after several other unsuccessful inquiries. Dr. P. H. Fischer, Curator of Paleontology of the École des Mines in Paris, informed me (*in litteris*) that the type specimen was in the collection of his institution. He kindly provided me with photographs of the holotype, Plate 19, figure 2. The type appears to be a badly worn specimen of *Pteronotus carpenteri* DALL (1899), a species commonly dredged in shallow water off the coast of California (*cf.* Plate 19, figures 2 and 4). It apparently was picked up from a beach by a member of the party of the ship "Venus", which visited California, including Monterey, during 1837 or 1838.

More than passing mention must be made of the status of *Pteronotus carpenteri* DALL (1899) and *Murex petri* DALL (1900) before attempting to propose a synonymy for *Murex macropterus*. The dubious nature of Dall's taxa has been recently discussed by several students, including KEEN (1945), SMITH (1945), SMITH & GORDON (1948), BURCH (1952), and ABBOTT (1952). The confusion results from Dall's failure to designate holotypes.

Briefly, DALL (1899) described *Pteronotus carpenteri* without providing an illustration. The description and measurements indicate a large shell with prominently digitate varices, the form later named *Murex carpenteri alba* by BERRY (1908) and *M. carpenteri tremperi* by DALL (1910). This is the "southern" form that is commonly dredged off southern California in shallow water. However, DALL (1899) also mentioned that "Young specimens are more pointed, and with narrower, less digitate varices than the adults", the so-called northern form that is common in shallow water off Monterey (see Plate 19, figure 4). Thus, Dall included both the presently recognized "northern" and "southern" forms in the original description and neglected to designate a holotype or to state the type locality. DALL (1899) listed specimens from three localities: Monterey, California, F. L. Button; Farallone Islands, California, J. S. Arnheim; and off Point Conception, California, in 31 fathoms (U. S. Fish Commission). Only the last locality is represented by a specimen in the U. S. National Museum collection (U. S. N. M. cat. no. 160023). This is a small specimen, measuring 28.3 mm in altitude and 13.4 mm in width, of the "northern" form.

In 1902, DALL figured a specimen from off San Diego, California, in 36 fathoms (U. S. N. M. cat. no. 122596), as *Murex (Pteropurpura) carpenteri*, and this specimen, which is in the U. S. National Museum, is accompanied by a label carrying the designation "Co-type" in Dall's handwriting (see Plate 20, figure 2). This specimen is not mentioned by DALL (1899) in the original description, but was catalogued in July of 1891 and must have been part of the original lot. It is one of the specimens that Dall apparently thought to be a "young specimen", but actually represents the slender form commonly dredged off Monterey, not the larger form with more digitate varices that is common off southern California. ABBOTT (1952) suggested that the F. L. Button collection might contain

the specimen (co-type) for which measurements were cited by DALL (1899). Through the kind offices of Dr. Alan Solem of the Chicago Natural History Museum, I was able to borrow three specimens that retain the original Button label reading "*Pteronotus carpenteri*, Monterey, California." The largest of these specimens, all the "southern" form (Plate 19, figure 5), has dimensions that are somewhat smaller than those cited by Dall in the original description. As there is no evidence to indicate that the specimens in the Button collection formed part of Dall's original lot, and as only one specimen from Monterey was mentioned by DALL (1899) as remaining in the Button Collection, these specimens would seemingly not qualify as syntypes. Thus, Dall's measured specimen, the other co-type, would appear to be lost.

Under the circumstances, the most logical procedure would be to consider Dall's existing co-type (1902, pl. 34, fig. 9) the lectotype of *Pteronotus carpenteri*, and thus retain the presently generally accepted concept of this taxon (see Plate 20, figure 2).

The status of *Murex petri* DALL (1900) is also confused owing to the lack of an illustration or the designation of a type specimen. The type locality was given as "San Pedro, California", in rather deep water and the specimen was from the Oldroyd Collection. There is, however, a specimen in the U. S. National Museum (cat. no. 183056) having the dimensions cited by Dall in the original description. This specimen was not catalogued until April 1, 1905, and, apparently owing to the delay in cataloguing, only "California, Mrs. Oldroyd" is entered in the catalogue book. A smaller specimen, measuring 52.4 mm in height and 27.9 mm in width, is labeled San Pedro, California, Oldroyd (U. S. N. M. cat. no. 160499) and was catalogued on July 3, 1900. These specimens should be considered the lectotype and a paratype, respectively. Unfortunately, DALL (1902, pl. 34, fig. 7) later figured a specimen of *Murex rhyssus* DALL

### Explanation of Plate 19

(All figures x 1½)

#### *Pteropurpura macropterus* (DESHAYES, 1839)

Figure 1: Original figure of *Murex macropterus* DESHAYES, 1839 (after DESHAYES, 1841, plate 38).

Figure 2: Holotype of *Murex macropterus* DESHAYES, 1839, in École des Mines, Paris, courtesy of Dr. P. H. Fischer

Figure 3: Specimen labeled *Murex macropterus* DESHAYES, 1839, in the British Museum (Natural History), courtesy of S. P. Dance.

Figure 4: A typical specimen of the "northern" form of *Pteronotus carpenteri* DALL, 1899, from off Del Monte, California, in 10 to 12 fathoms (A. M. N. H. cat. no. 100490; ex - M. Gordon coll., ex - CAS coll. no. 36241).

#### *Pteropurpura alba* (BERRY, 1908)

Figure 5: A typical specimen of the "southern" form of *Pteronotus carpenteri* DALL, 1899, from "Monterey, California" (C. N. H. M. cat. no. 108441, ex Button coll.).



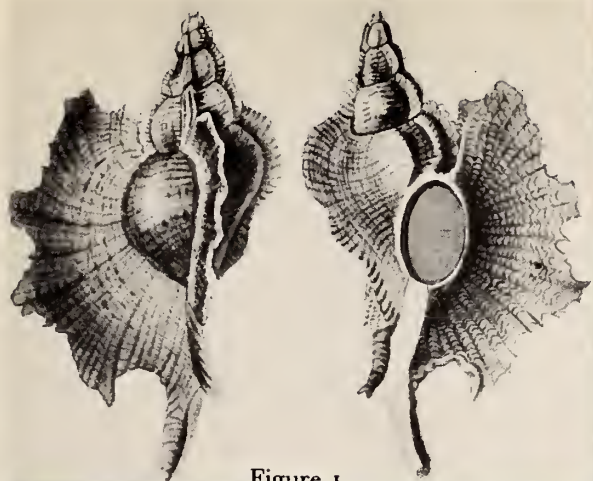


Figure 1



Figure 2

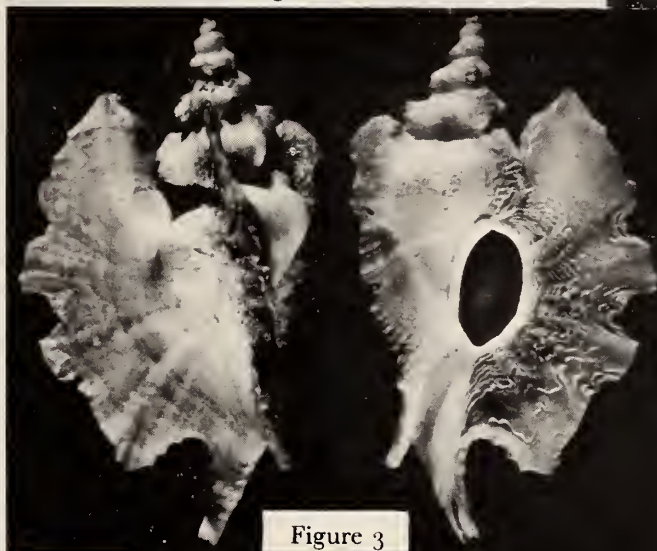


Figure 3

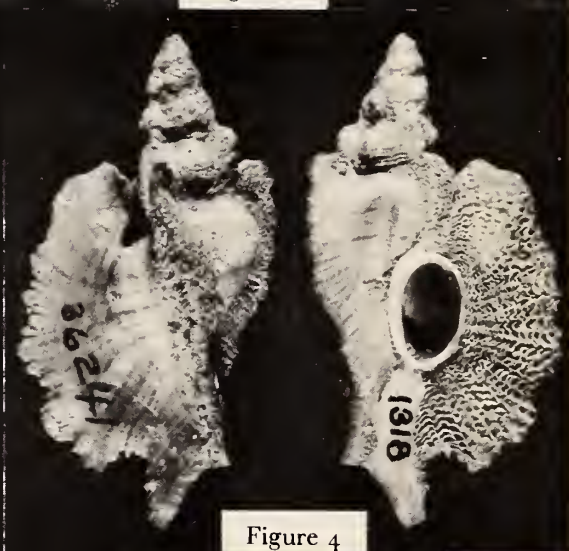


Figure 4

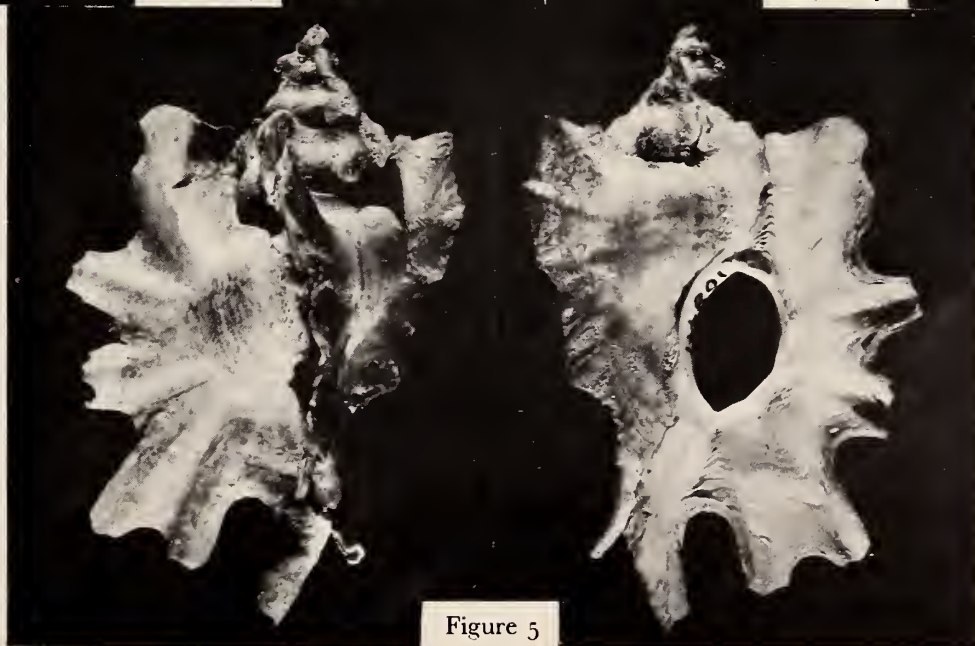


Figure 5

